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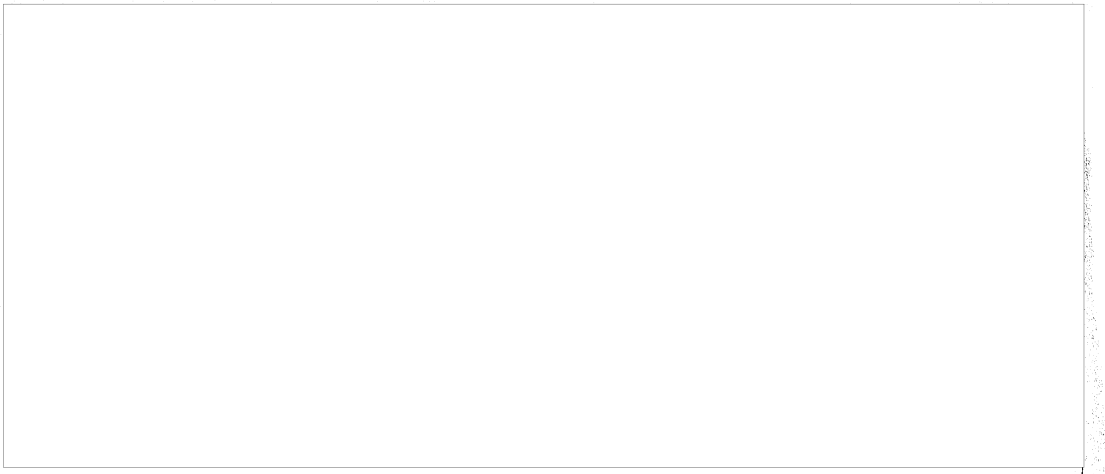

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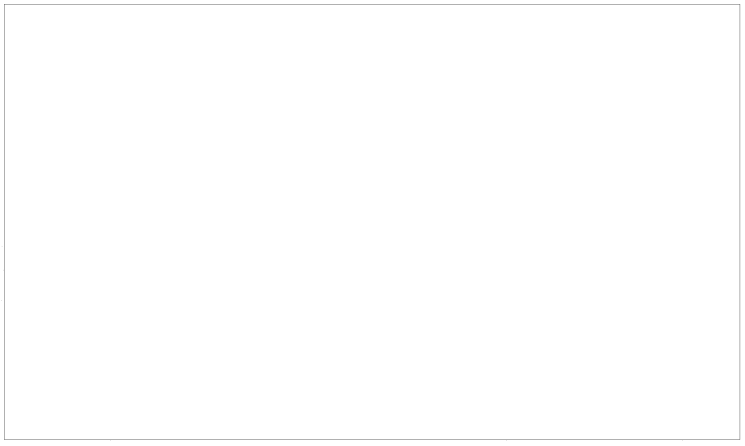
SELECTED TRANSLATIONS AND ABSTRACTS FROM THE GERMAN PERIODICAL "DAS ELEKTRON IN WISSENSCHAFT UND TECHNIK" IN THE FIELD OF ELECTRICITY AND ELECTRONICS

Source: Das Elektron in Wissenschaft und Technik
No 6, July 1951, pp 192-194
No 9, Sep 1951, inside front cover
No 10, Oct 1951, pp 317-322



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I. The Determination of the e/m By Means of a Cathode-Ray Tube by Wilhelm Kleinfelder. Munich; pp 192-194. No 6, July 1951 [ABSTRACT]

The article deals with Busch's method of measuring the e/m. Electron beams of a definite velocity are produced and made to diverge by artificial means. Then the bunch enters a magnetic field excited by a coil surrounding the ~~XXXXXXX~~ cathode-ray tube. The current in the coil is so adjusted that a node is produced on the screen of the tube. Since in the node the electrons intersect with the axis, or at least come very close to it in their path, the radius of the image must have a minimum in the node position. The distance from the point of divergence to the screen must be known or have been measured on a destroyed tube. Then the e/m can easily be computed by means of formulas presented in the article.

II. Photoelectric Cells, Their Production and Operating (Die lichtelektrischen Zellen, ihre Herstellung und ihre Anwendung), by Dr Ing Habil. Leal Goerlich. Vol. 7 of Technical-Physical Monographs. Akademische Verlagsgesellschaft Geest und Portig, Leipzig. 1951; inside front cover. No 9. Sept 1951 [TRANSLATION OF BOOK REVIEW]

The aim of this book is orientation in the entire field of photoelectric phenomena, especially for the technician. The author has tried to reflect all the latest developments; above all, infrared cells have been given consideration. The detailed bibliography is an outstanding feature of the book.

III. Learn to Oscillograph by Oscillography (Selbstlehr kurs fotoferndruck-Oszillographie), by Ing. Heinz Richter. Franzis-Verlag, Munich, 1950; inside front cover. No 9. Sept 1951 [TRANSLATION OF BOOK REVIEW]

The author presupposes little knowledge on the part of the reader and aims to furnish mainly practical aids for everyday professional use. He may be considered successful in his efforts. The atlas of oscillograms is worth noticing.

IV. Fundamentals of Broadcast Interference Elimination (Grundlagen der Rundfunkentstoerung), by Prof Dr Ing Friedrich Benz. Verlag Rudolf Bohmann, Wien I; inside front cover. No 9. Sept 1951 [TRANSLATION OF BOOK REVIEW]

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This manual shows the cause of interferences and their elimination or avoidance.

V. Tube Testing Techniques (Rochrenmesstechnik) - Usability and Defect Determination of Radio Tubes, by Helmut Schweitzer, Franzis-Verlag, Munich, 1950; [TRANSLATION OF BOOK REVIEW] inside front cover, No 9, Sept 1951.

This thorough book will appeal above all to the radio technician who, by way of tube testing techniques, wishes to gain an understanding of the functioning of tubes. It will be an invaluable aid in all his work with tubes. Because the statements made in the book have general validity, they will apply even to all new types of tubes appearing on the market.

VI. Electrical Engineering Instruments and Methods (Elektrische Messgeraete und Messverfahren), by Dr Ing J.F. Ilgner, Springer-Verlag, Berlin-Gottingen-Heidelberg, 1951; inside front cover, No 9, Sept 1951. [TRANSLATION OF BOOK REVIEW]

This book is devoted to the many classes of circuits and colleagues who must occasionally carry out electrical measurements and who wish to inform themselves of the properties and circuits of electrical measuring instruments to the extent expedient for their particular purpose.

VII. Oscillatory Circuits Containing Iron-Core Coils (Schwingungskreise mit Eisenkernspulen), by Dr F. Strecker, Vol 7, Lehrbrief der Hochfrequenztechnik, edited by Prof Dr J. Zenneck, Akademische Verlags-gesellschaft Geest u. Portig, Leipzig; inside front cover, No 9, Sept 1951. [TRANSLATION OF BOOK REVIEW]

The literature on the many possible applications of iron-core coils is widely dispersed. This gap was closed by the author with his excellent survey. Five chapters deal with the iron-core coil itself, and another one with its applications. Each chapter has a good bibliography including in some instances even pre-war literature.

VIII. The Physical Principles of the Spark Discharge Lamp, by Gunther Glaser, (Die Physikalischen Grundlagen der Funkenentladungslampen); pp 317-322, No 10, Oct 1951. [ABSTRACT]

Spark discharge lamps are characterized by the fact that under suitable spark conditions and in a suitable gas atmosphere the spark will yield a light emission of the most favorable spectral distribution and that it may be released at will.

The article discusses in general the influence of the electrical discharge parameters and the pressure and type of the gas on the radiation of the lamp, and the fundamentals governing the obtaining of specific properties. The work restricts itself to short-period, strong-current condenser discharge.

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